

Lean Environmental Management Integration System (LEMIS) Framework Development

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Abstract : The Lean Environmental Management Integration System (LEMIS) framework development is integration between lean core element and ISO 14001. The curiosity on the relationship between continuous improvement and sustainability of lean implementation has influenced this study toward LEMIS. Characteristic of ISO 14001 standard clauses and core elements of lean principles are explored from past studies and literature reviews. Survey was carried out on ISO 14001 certified companies to examine continual improvement by implementing the ISO 14001 standard. The study found that there is a significant and positive relationship between Lean Principles: value, value stream, flow, pull and perfection with the ISO 14001 requirements. LEMIS is significant to support the continuous improvement and sustainability. The integration system can be implemented to any manufacturing company. It gives awareness on the importance on why organizations need to sustain its Environmental management system. At the meanwhile, the lean principle can be adapted in order to streamline daily activities of the company. Throughout the study, it had proven that there is no sacrifice or trade-off between lean principles with ISO 14001 requirements. The framework developed in the study can be further simplified in the future, especially the method of crossing each sub requirements of ISO 14001 standard with the core elements of Lean principles in this study.

Keywords : LEMIS, ISO 14001, integration, framework

Conference Title : ICEIT 2014 : International Conference on Industrial Engineering and Information Technology

Conference Location : Bangkok, Thailand

Conference Dates : December 18-19, 2014